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CENTER FOR CONTINUING & OUTREACH EDUCATION
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Division of AIDS Education

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AIDS LINE

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CME Section

Articles

Features

Director's Message

Sweat and Tears

Dion Richetti, DC
Director, Division of AIDS Education

UMDNJ – Center for Continuing and Outreach Education

In high school English Composition class, Mrs. Hegarty suggested that starting my essay with a definition, if nothing else, would stimulate thought. As trite as this technique may be, I have found that it works. Sometimes breaking an idea down to the definition can provide insight that is missed in more complex analysis.

Stedman's Medical Dictionary defines medicine as: "The art of preventing or curing disease." In the case of the disease caused by the human immunodeficiency virus (HIV), the artists have been working in separate buildings for too long. The idea that prevention and care are part of the same continuum has been discussed and supported since at least the late 1990's. It was not until the 2000 Ryan White CARE Act Reauthorization that policy and funding began to follow the theory. With the CARE Act reauthorization of 2000, counseling and testing for HIV as part of Early Intervention Programs (EIP) officially joined the continuum of care. With the advent of Rapid Testing (which identified 327 new positive individuals in New Jersey in the fiscal year ending June 30, 2005), New Jersey has achieved greater potential to understand our HIV epidemic. Understanding who is HIV positive will help not only those infected but will assist significantly in preventing others from becoming infected.

In the "real world" of real people at risk for and living with HIV disease, healthcare providers have learned that they cannot work alone. HIV care, treatment and prevention never happen in isolation. In the case of preventing HIV infection, it has become clear that we must do more

continued on page 16

Register online at www.peopleware.net/0646a.
- New Jersey Ryan White All-Titles conference
- Reducing Perinatal HIV Transmission in NJ

CME

Treatment of Tuberculosis in Patients Infected with HIV: An Update

Target Audience: This activity is designed for physicians and nurses, and for other health care professionals who are involved in the care and support of individuals with HIV infection.

Statement of Need: The treatment of tuberculosis (TB) in the HIV-infected patient is critical and challenging for clinicians. HIV-infected patients have a 10% chance per year of developing active TB, following infection with *Mycobacterium tuberculosis* (*M. tuberculosis*). *M. tuberculosis* increases HIV replication both at local tissue sites and systemically. Studies have shown that HIV-infected patients with TB die sooner than HIV-infected patients without TB. Antiretroviral medications for HIV treatment and anti-TB regimens must be carefully staggered or coordinated to reduce interactions and toxicities, and assure effectiveness of treatment for both diseases. The U.S. Food and Drug Administration and Roche Laboratories Inc. issued a warning in February 2005 that "use of rifampin is contraindicated in HIV-infected patients receiving ritonavir-boosted saquinavir/saquinavir mesylate (Fortovase/Invirase) as part of combination antiretroviral therapy (ART) due to a high risk of hepatotoxicity." The Centers for Disease Control issued new treatment guidelines in late 2004 [*CDC. Notice to Readers: Updated Guidelines for the Use of Rifamycins for the Treatment of Tuberculosis Among HIV-Infected Patients Taking Protease Inhibitors or Nonnucleoside Reverse Transcriptase Inhibitors. MMWR 2004; 53:2*]. Clinicians treating patients with TB and/ or HIV need to know about these new guidelines for diagnosis and co-management of the two illnesses, in order to effectively treat patients. This complex dual treatment may require more intensive monitoring and involvement of medical and allied health professionals, including patient counseling and education, directly observed therapy, and case management, to increase adherence and reduce resistance to medications.

Learning Objectives: Upon the completion of this activity, participants should be able to:

- Understand the mechanism of drug interactions between the rifamycins and nonnucleoside reverse transcriptase inhibitors and protease inhibitors
- Describe the new recommendations for treatment of active TB disease in HIV-infected patients on antiretroviral treatment
- Identify adherence-enhancing mechanisms for working with co-infected patients
- Provide the rationale for delaying anti-retroviral treatment in patients newly diagnosed with HIV infection and who have begun treatment for TB disease

Method of Instruction: Participants should read the learning objectives and review the activity in its entirety. After reviewing the material, complete the self-assessment test consisting of a series of multiple-choice and True/False questions.

Upon completing this activity as designed and achieving a passing score of 70% or more on the self-assessment test, participants will receive a CME credit letter awarding AMA/PRA category 1 credit and the test answer key four (4) weeks after receipt of the self-assessment test, registration, and evaluation materials.

Estimated time to complete this activity as designed is 1 hour.

UMDNJ–Center for Continuing and Outreach Education is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

UMDNJ–Center for Continuing and Outreach Education designates this educational activity for a maximum of 1 category 1 credit toward the AMA Physician's Recognition Award. Each physician should claim only those credits that he/she actually spent in the activity.

The activity was prepared in accordance with the ACCME Essentials.

This activity was reviewed for relevance, accuracy of content, balance of presentation, and time required for participation by Dion Richetti, DC and Patricia Kloser, MD, MPH

Faculty: Alfred Lardizabal, MD is Assistant Professor of Medicine at the New Jersey Medical School, UMDNJ.

Rajita Bhavaraju, MPH, CHES is the Program Director, Education and Training, for the New Jersey Medical School National Tuberculosis Center at UMDNJ.

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Faculty Disclosure Declarations: Patricia Kloser, MD, MPH (Field Tester) has the following financial relationships to disclose: Speaker's Bureau: GlaxoSmithKline, Roche, Consultant: Gilead, Boeinger Ingleheim

The faculty listed below declare that they have no financial relationships with any corporate organization whose product(s) will be discussed in this presentation: Rajita Bhavaraju, MPH, CHES, Alfred Lardizabal, MD

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The drug selection and dosage information presented in this activity are believed to be accurate. However, participants are urged to consult the full prescribing information on any agent(s) presented in this activity for recommended dosage, indications, contraindications, warnings, precautions, and adverse effects before prescribing any medication. This is particularly important when a drug is new or infrequently prescribed.

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University of Medicine and Dentistry of New Jersey

Center for Continuing & Outreach Education
Division of AIDS Education

A Local Performance Site of the NY/NJ AETC

Dion A. Richetti, DC, Director
Patricia C. Kloser, MD, MPH, Medical Director

30 Bergen Street, ADMC 710
PO Box 1709
Newark, New Jersey 07101-1709
973-972-3690: phone
973-972-3371: fax
http://ccoe.umdnj.edu/aids

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Editor
Kimi Nakata, MSW, MPH

Contributing Writers

Linda Berezny, RN; Rajita Bhavaraju, MPH, CHES; Phil Bruccoleri; Evan Cadoff, MD; Skip Drumm; Monica Harvey-Talbot; Alfred Lardizabal, MD; Eugene Martin, Ph.D.; Rose Marie Martin, MPH; Aye Maung Maung; Kimi Nakata, MSW, MPH; Lorhetta Nichol; Sindy Paul, MD, MPH; Dion Richetti, DC; Maureen Wolski; and Rhonda Williams

Medical Advisor

Sindy Paul, MD, MPH, N. J. Department of Health and Senior Services

Treatment of Tuberculosis in Patients Infected with HIV: An Update

Alfred Lardizabal
MD; Assistant Professor of Medicine, New Jersey Medical School
Rajita Bhavaraju
MPH, CHES; Program Director, Education and Training, New Jersey Medical School National Tuberculosis Center

CME

The New Jersey Medical School National Tuberculosis Center is one of four Regional Training and Medical Consultation Centers in the United States, which are supported by a federally funded Cooperative Agreement from the Division of Tuberculosis Elimination, Centers for Disease Control and Prevention. It receives additional support through grants from the CDC, US Agency for International Development, and the NJ Department of Health and Senior Services. The Center provides training, technical assistance, and clinical consultation to health care professionals and the public through its toll-free information line (1-800-4TBDOCS), and a website with an extensive collection of downloadable materials at http://www.umdnj.edu/ntbcweb**.**

Learning Objectives:

Upon completion of this article, the reader will be able to:

- Understand the mechanisms of drug interactions between the rifamycins and nonnucleoside reverse transcriptase inhibitors and protease inhibitors
- Describe the new recommendations for treatment of active TB disease in HIV-infected patients on anti-retroviral treatment
- Identify adherence-enhancing mechanisms for working with co-infected patients
- Provide the rationale for delaying anti-retroviral treatment in patients newly diagnosed with HIV infection and who have begun treatment for TB disease

Abstract

Tuberculosis (TB) continues to be a significant risk to persons with HIV infection, as activation of latent TB infection is 100 times more likely to progress to active TB disease than in the non-HIV-infected person, and also decreases the ability to fight HIV disease progression. The CDC has updated recommendations for treatment of tuberculosis disease in HIV-infected patients, based on findings of drug interactions between the rifamycins and nonnucleoside reverse transcriptase inhibitors and protease inhibitors. Many HIV-positive patients with active TB disease should be treated for TB before antiretroviral treatment for HIV disease, to assure complete TB treatment and adherence to each complex treatment regimen. All co-infected patients should have individualized treatment including adherence-enhancing approaches such as staggering initiation of regimens, directly observed therapy, and patient counseling.

Background

The treatment of tuberculosis (TB) in the HIV-infected patient provides a challenge to the clinician. HIV-infected patients infected with *Mycobacterium tuberculosis* (*M. tuberculosis*) have a 10% chance per year of developing active TB, in contrast to the usual rate of 10% over a lifetime. Studies have shown that the risk rate ratio ranges between 3.5 and 26.3 times for HIV-infected patients with positive tuberculin skin test (TST) results compared with HIV-infected patients with negative tuberculin skin test results (Table 1). *M. tuberculosis* increases HIV replication both at local tissue sites and systemically.[1] Other studies have shown that HIV-infected patients with TB die sooner than HIV-infected patients without TB.[2] The complexities of treatment pose additional difficulties, which require an ability to provide education and address patients' needs related to two illnesses and the management of those illnesses.

Table 1. Annual rates* of tuberculosis among persons with HIV infection, by TST status - selected years and U.S. areas

Location and source	Rate among persons with positive TST result	Rate among persons with negative TST result	Risk ratio
New York City Selwyn et al., 1989	7.9	0.3	26.3
San Francisco Daley et al., 1998	5.0	1.0	5.0
Multiple sites Markowitz et al., 1997 East Coast	4.6	1.3	3.5
West/Midwest	1.7	0.2	8.5
All sites	4.5	0.4	11.3

*Cases per 100 person-years

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TB and HIV: The Role of Immune Response

While having HIV infection is often acknowledged as contributing to many patients' development of other infections, and the impaired ability to deal with those infections, the presence of TB has a similar contribution to HIV status. Many cytokines are released as part of the host immune response to *M. tuberculosis*. Initially, alveolar macrophages encounter the tubercle bacilli and they present mycobacterial antigens to antigen specific CD4+ T-cells. These T-cells release interferon-γ, a cytokine that activates the macrophages, and enhances their ability to control the mycobacterial infection. The activated macrophage releases pro-inflammatory cytokines, which increase HIV replication in cells. *M. tuberculosis* also increases the secretion of anti-inflammatory cytokines, which may contribute to the immune suppression often observed during TB.[3] The overall effect of *M. tuberculosis* is to accelerate the rate of progression of HIV disease.

Challenges of Treating the Co-Infected Patient: Drug-Drug Interactions

Treatment of latent TB infection with isoniazid for HIV-infected patients with positive TST results has been reported to not only decrease the incidence of TB but also to delay onset of HIV-related illnesses and to prolong survival.[4] Isoniazid poses no contraindications in the treatment of the co-infected patient on HIV-antiretroviral treatment. However, for an HIV patient who is on treatment for active TB disease, when rifamycin treatment is introduced, treatment becomes more complex, specifically, for patients on nonnucleoside reverse transcriptase inhibitors (NNRTI) and protease inhibitors (PI).

The principal locus of these drug-drug interactions is the cytochrome P450 (CYP) system in the intestinal wall and liver, specifically the isoenzyme CYP3A4. Rifamycins induce the activity of CYP3A4 and may substantially decrease serum concentrations of PIs and NNRTIs. Fortunately, this is not the case with the nucleoside/nucleotide reverse transcriptase inhibitors (NRTIs) and fusion inhibitors.

There are differences, however, between the rifamycins and their ability to induce the P450 cytochrome 3A4 oxidases. Rifampin (RIF) is the most potent inducer, rifapentene is intermediate, and rifabutin (RBT) is the least potent inducer. In addition, PIs impair the metabolism of rifamycins, resulting in increased serum levels of rifamycins, with increased risk of toxicity. With some dose adjustments, rifabutin can be safely used with most PIs and NNRTIs.

The possibility exists to treat optimally both TB and HIV disease, with rifabutin instead of rifampin, using PI or NNRTI containing HAART (Tables 2 and 3). Rifabutin has similar efficacy compared to rifampin in the treatment of TB in HIV. However, if a rifamycin is excluded from the TB treatment regimen, this may result in delayed sputum conversion, prolong the duration of therapy, and possibly result in a poorer outcome. Rifapentine, a long-acting rifamycin, is **not** recommended for the treatment of TB in HIV-infected persons because of its association with acquired rifamycin resistance.

Diagnosis of TB

There are four steps in diagnosing TB disease: medical history and examination, tuberculin skin test, chest X-ray, and bacteriologic examination. A medical history includes asking

Recommendations for Co-Administration of Rifamycins and NNRTIs and PIs

Table 2: Rifabutin (RBT)-Based Regimen

Nonnucleoside reverse transcriptase inhibitors	
RBT	NNRTI[1]
450-600 mg/day or 600 mg 3x/week 300 mg/day or 300 mg 3x/week	Efavirenz (standard dose) Nevirapine (standard dose)
Protease Inhibitors	
RBT	Single PI
150 mg/day or 300 mg 3x/week 150 mg/day or 300 mg 3x/week 150 mg/day or 300 mg 3x/week 150 mg alternate days or 3x/week 150 mg alternate days or 3x/week	Amprenavir/fos-amprenavir (usual dose) Indinavir 1000 mg TID Nelfinavir 1250 mg BID Atazanavir (usual dose) Ritonavir (usual dose)
RBT	Dual PI
150 mg alternate days or 3x/week 150 mg alternate days or 3x/week	Lopinavir/ritonavir Ritonavir (any dose) booster with saquinavir, indinavir, amprenavir, fos-amprenavir, or atazanavir
Do not use delavirdine and unboosted saquinavir with RBT	
[1]These recommendations apply to regimens that do not include PIs, which can substantially increase RBT levels.	

Table 3: Rifampin (RIF)-Based Regimen

Nonnucleoside reverse transcriptase inhibitors	
RIF	NNRTI
600 mg/day	Efavirenz 800 mg/day (max)[1]
Do not use nevirapine and delavirdine with RIF.	
Protease Inhibitors	
Do not use amprenavir, atazanvir, fos-amprenavir, indinavir, lopinavir/ritonovir, nelfinavir, ritonavir, boosted/ unboosted saquinavir, with RIF.	
[1]If efavirenz 800 mg cannot be tolerated, reduce to 600 mg.	

Source: CDC. MMWR 2004, 53:2

the patient if (s)he has been exposed to a person with TB or with symptoms of TB disease, if (s)he has had TB infection or TB disease before, or risk factors for developing TB disease. The symptoms of pulmonary TB disease may include coughing, pain in chest when breathing or coughing, coughing up sputum, and coughing up blood (hemoptysis). Systemic symptoms of TB disease (pulmonary or extrapulmonary) may include weight loss, fatigue, malaise, fever, and night sweats. The symptoms of extrapulmonary TB disease depend on the part of the body that is affected by the disease.

Patients with symptoms of TB disease should be given a Mantoux tuberculin skin test, with verification of previous skin test history, although symptomatic patients should be evaluated for TB disease immediately, regardless of their test results. Patients from countries that use the BCG vaccine often test positive, and then should be considered to have TB infection. They still need to be evaluated for active TB disease, as BCG does not prevent individuals from contracting TB, and its protective value wanes over time. The chest X-ray is used to help rule out the possibility of pulmonary TB disease in a person who has a positive reaction to the tuberculin skin test, and checks for lung abnormalities in people who have symptoms of TB disease, preferably with prior X-rays for comparison. The results, however, cannot confirm that a person has TB disease.

Finally, diagnosis of TB disease must be confirmed by bacteriologic examination, in which three sputum cultures (specimens) are obtained from patients suspected of having pulmonary TB disease; other site-specific specimens are obtained from patients suspected of having extrapulmonary TB disease; bronchoscopy may be necessary if the patient cannot cough up sputum. The specimen is examined under a microscope for the presence of acid-fast bacilli (AFB). Patients with positive smears are considered infectious, especially when AFB are numerous. The specimen is then cultured, or grown, to determine whether it contains M. tuberculosis. A positive culture for M. tuberculosis confirms the diagnosis of TB disease. After the specimen has been cultured, it is tested for drug susceptibility. The results of these tests can help clinicians choose the appropriate drugs for use in treatment.[5,6,8,11]

Beginning Antiretroviral Treatment (ART)

Often a TB patient's HIV status is unknown, and the clinician needs to counsel the patient to be tested for HIV infection. This is important for both the accurate diagnosis of TB in the patient and, subsequently, for appropriate treatment of the patient.

If a patient's HIV-positive status is discovered upon initiation of TB treatment, clinicians are required to make some decisions about the course of TB treatment and when to begin ART. In determining when to begin ART for co-infected patients, clinicians should monitor the patient's condition by measuring plasma RNA levels and CD4+ T-cell counts, and assessing the HIV-associated clinical condition to decide the timing for initiating such therapy. Together, clinicians and patients need to also consider other existing medical issues such as drug interactions and toxicities, ability to adhere to two complex treatment regimens, and laboratory abnormalities. A staggered initiation of anti-TB treatment and ART is recommended at the end of the 2-month induction phase of TB therapy or after TB therapy is completed. For some patients, switching from a RIF-based regimen to an RBT-based regimen will be necessary if ART is initiated before the completion of anti-TB treatment. However, clinicians need to plan for a 2-week "washout" period between the last dose of RIF and first doses of PIs and/or NNRTIs. Alternatively, if ART will be initiated during the anti-TB treatment, the induction phase should include RBT instead of RIF.[7,8]

All decisions should be discussed with the patient. TB treatment lasts for at least 6 months with multiple drugs. The initiation of ART adds pill burden, which can be overwhelming for the HIV-infected patient. Conversely, this is also true if the patient has already been diagnosed with HIV infection and later develops TB disease, resulting in four more drugs being added to an already complex regimen. Clinician and patient discussions should focus on how all of the patient's surrounding life circumstances may affect his or her ability to adhere to treatment along with the side effects and toxicities associated with the regimen.

CME

Table 4. Treatment Regimens In Patients Receiving Antiretroviral Therapy For Pansensitive Tuberculosis Organisms

<table>
<tr><th colspan="2">Induction Phase</th><th colspan="3">Continuation Phase</th></tr>
<tr><th>Drugs
Daily
mg/kg
[maximum dosage]</th><th>Duration</th><th>Drugs
Daily
mg/kg
[maximum dosage]</th><th>Drugs
3x weekly
mg/kg
[maximum dosage]</th><th>Duration</th></tr>
<tr><td>Isoniazid (INH): 5 [300][1]</td><td rowspan="6">2 months
(8 weeks)</td><td>INH: 5 [300]</td><td>INH: 15 [900]</td><td rowspan="6">4 months
(18 weeks)</td></tr>
<tr><td rowspan="5">Rifampin (RIF): 10 [600][2]
OR
Rifabutin (RBT): 5 [300][2,3]

Pyrazinamide (PZA): 20-25 [2 g]
Ethambutol (EMB): 15-20 [1.6 g]</td><td>RIF: 10 [600]</td><td>RIF: 10 [600]</td></tr>
<tr><td colspan="2">OR</td></tr>
<tr><td>INH: 5 [300]</td><td>INH: 15 [900]</td></tr>
<tr><td>RBT: 5 [300]</td><td>RBT: 5 [300]</td></tr>
</table>

[1]Pyridoxine (vitamin B6) 50 mg/day should be given to all HIV-infected patients taking INH.

[2]Rifamycins have significant interactions with methadone, oral contraceptives, and other drugs. See MMWR 2003; 52 (RR-11), p. 47.

[3]RBT dosage is based on weight and class of co-administered HIV drugs (i.e., NNRTI and/or PI) in the HAART regimen. Maximum RBT dosage varies when administered with efavirenz.

CME

Case Presentation: Uncovering TB and HIV

A 30-year-old Haitian man was admitted to the hospital with a history of weight loss, night sweats, high fevers, neck swelling, and diarrhea. He reported feeling well until several months prior to admission, when he noted a significant amount of weight loss, more than 30 to 40 pounds, in the last 6 months. Three to four weeks prior to admission he noted night sweats, fevers, and right-sided neck swelling. Ten to fourteen days before admission he began to experience watery diarrhea, associated with cramping and bloating.

The patient's past medical history was unremarkable. He emigrated to the United States from Haiti in 1990. He had traveled recently back to visit Haiti. He denied injection drug use, but reported numerous heterosexual sexual partners in his life. During the physical exam he was alert and in no apparent distress. Throat examination was remarkable for mild oral thrush and a neck exam revealed the right sided mass. All other exams were normal including his chest X-ray.

After various differential diagnoses were considered, a surgical biopsy was performed on the right-sided neck mass revealing pus and lymph nodes. The lymph node material revealed acid-fast bacilli, 4+ positive, and the pathology report showed necrotizing inflammation with acid fast bacilli (AFB). Three sputum specimens were collected for AFB smear and culture. **However, the patient was diagnosed as HIV positive by ELISA and Western Blot assays with a CD4+ cell count of 11 mm3 and HIV RNA was measured at 118,000 copies/ml.** The patient was started on a daily treatment regimen to cover for both *M. tuberculosis* and *M. avium* complex. The regimen consisted of: INH (300 mg), rifabutin (300 mg), PZA (1.5 g), EMB (1.2 g), and Clarithromycin (500mg BID).

How the Patient was Managed

Since the patient had been started on treatment for probable TB adenitis, the patient's physician decided to defer starting ART until the patient was on TB therapy for at least 4 to 8 weeks and wait until those medications were being well tolerated. After this phase and discussions with the patient, ART was initiated with an NNRTI (efavirenz) plus 2 NRTIs (didanosine and lamivudine), and the dosage for rifabutin was increased to 450mg. This regimen would later be modified based on final *M. tuberculosis* culture and sensitivity results.

Case Discussion: Use of the Patient-Centered Approach

As previously stated, patients suspected of having TB who have an unknown HIV-infection status should be sensitively approached about HIV testing. It is imperative that patients understand that the underlying concern is about the diagnosis and optimal treatment of TB, which makes the HIV diagnosis so important. Patients need to be educated in layperson's terminology about the immune response concerns associated with co-infection which can delay sputum conversion, making the patient's ability to feel better seem distant. It is also important that the patient understand that once he or she does feel better, the full course of anti-TB treatment still must be completed to eliminate any remaining TB bacilli.

Co-infected patients are a high priority for directly observed therapy (DOT). This means, ideally, that the ingestion of each dose of TB medication should be observed by a trained health care worker. This not only ensures adherence, but also provides a valuable link to a support system of public health outreach staff, who can monitor the patient on a regular basis for side effects as well as for unmet non-medical needs, which can affect treatment. Issues can be then immediately referred to the patient's clinician or to social services for follow up. Individualized case management is also key to the patient-centered approach. Each co-infected patient should have an assigned case manager who can monitor the patient in the clinic setting and be a "go between" for outreach and clinical staff.[9]

Summary

In conclusion, the management of TB among HIV-infected patients taking antiretroviral drugs is a challenge which can best be managed with clinician familiarity and experience with current treatment guidelines, effective patient communication, and individualized case management. This includes use of a TB treatment regimen that includes, in most cases, rifabutin instead of rifampin, a directly observed treatment regimen, and the availability of experienced and coordinated TB and HIV caregivers.

Footnotes

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6. CDC. Treating Opportunistic Infections Among HIV-Infected Adults and Adolescents: Recommendations of the US Public Health Service and the Infectious Diseases Society of America. MMWR 2004, 53(RR15);1-112.

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11. CDC. Treatment of tuberculosis. MMWR 2003;52.

FOR MORE INFORMATION ABOUT TUBERCULOSIS AND TB-HIV CO-MANAGEMENT:

TB AND HIV CO-TREATMENT SUMMARY
from the NJ Medical School National Tuberculosis Center

- TB treatment regimens should be directly observed to assure patient adherence, and therapy should be prolonged if there is a delay in clinical or bacteriological response. The continuation phase should be extended from 4 to 7 months (9 months of total treatment) if the 2-month treatment culture is positive and if there is cavitation indicated by a chest x-ray at 4 months of treatment.
- Although the principles of TB treatment are similar for children and adults, unique considerations must be followed when treating HIV and TB co-infected children. Children should be treated without delay. However, consultation with a specialist who has experience managing co-infected children is advised because indications for antiretroviral therapy, dosing of medications, and optimal length of therapy in children can vary.
- To prevent acquired rifamycin resistance in persons with advanced HIV infection (CD4+ cell counts ‹100/µl) and TB, use more frequent therapy (3x weekly or daily) with RIF or RBT-based therapies.
- Rifapentine, a long-acting rifamycin, is not recommended for the treatment of TB in HIV-infected persons because of its association with acquired rifamycin resistance.

As HIV and TB treatment guidelines change frequently, consult http://www.cdc.gov/tb and http://aidsinfo.nih.gov for up-to-date information, in addition to the references listed below.

Tuberculosis in New Jersey

Tuberculosis Is a reportable disease: physicians, advanced practice nurses, physicians' assistants, persons having control or supervision over a health care facility, school, summer camp, childcare center, preschool, or institution of higher education are required to report a suspected or confirmed tuberculosis diagnosis within 24 hours. TB suspected or confirmed cases are reportable directly to the New Jersey Department of Health and Senior Services, TB Program at 609-588-7522.

TB in NJ is declining but still a concern, especially for people with HIV: from calendar year (CY) 1992 to CY2004 newly reported TB cases declined by 51.0 percent (984 to 482) cases annually. A similar reduction in is reported for Active TB cases Co-infected with HIV, New Jersey, 1993-2004, from 239 in 1993 to 44 in 2004. It is important to note that while the 482 cases reported in CY2004 represent a new historical annual low in New Jersey, continued vigilance is needed through initiation of expert case management and the use of Directly Observed Therapy (DOT) to continue this downward trend. For more information about the New Jersey Tuberculosis Program: http://www.state.nj.us/health/cd/tbhome.htm

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Centers for Disease Control and Prevention (CDC), Division of Tuberculosis Elimination (DTBE)

www.cdc.gov/tb

- CDC. New CDC Program for Rapid Genotyping of Mycobacterium tuberculosis Isolates. MMWR 2005:54: 47.
- CDC. Treating Opportunistic Infections Among HIV-Infected Adults and Adolescents Recommendations from CDC, the National Institutes of Health, and the HIV Medicine Association/Infectious Diseases Society of America MMWR:2004; 53, No. RR15;1-112. http://www.cdc.gov/mmwr/PDF/RR/RR5315.pdf
- CDC. Treatment of tuberculosis. MMWR 2003; 52 (RR-11).
- CDC. Updated guidelines for the use of rifamycins for the treatment of tuberculosis among HIV-infected patients taking protease inhibitors or nonnucleoside reverse transcriptase inhibitors. MMWR 2004; 53:37.
- Interactive Core Curriculum on Tuberculosis [2004]

  http://www.cdc.gov/nchstp/tb/webcourses/CoreCurr/index.htm

  This on-line course includes chapters on:

  1) Tuberculosis in the United States
  2) Transmission and Pathogenesis of Tuberculosis
  3) Testing for Tuberculosis Disease and Infection
  4) Diagnosis of Tuberculosis
  5) Treatment of Latent Tuberculosis Infection
  6) Treatment of Tuberculosis Disease
  7) Infection Control in Health Care Settings
  8) BCG Vaccination
  9) Community Tuberculosis Control.

  On average, it takes approximately 5 hours to complete the entire 9-chapter course. The CDC provides free on-line continuing education credit for physicians, nurses, and health educators. TB recommendations change often.
- Consult the CDC Tuberculosis website for updates to recommendations: www.cdc.gov/tb.

American Academy of Pediatrics, Committee on Infectious Diseases. Tuberculosis. In L.K. Pickering (Ed.), 2003 Red Book: Report of the Committee on Infectious Diseases. 26th ed. Elk Grove Village, IL: American Academy of Pediatrics, 2003:642-660.

CME

CME

CME QUIZ

Treatment of Tuberculosis in Patients Infected with HIV: An Update

Questions refer to the content of the article and the notes that follow. To receive CME credit: complete exam, registration, and evaluation forms on-line at http://ccoe.umdnj.edu/aids or fill in the forms on the next 2 pages, and mail or fax to UMDNJ-CCOE (see next page).

1. Which of the following anti-TB drugs has the greatest ability to decrease serum levels of certain HIV anti-retroviral drugs?

   a. Rifampin
   b. Ribabutin
   c. Isoniazid
   d. Rifapentine

2. Rifampin can be safely used with boosted saquinavir.

   a. True
   b. False

3. For which category of antiretroviral therapy do rifamycins induce the P450 cytochrome 3A4 oxidases?

   a. Nucleoside reverse transcriptase inhibitors
   b. Non-nucleoside reverse transcriptase inhibitors
   c. Fusion inhibitors
   d. Nucleotide reverse transcriptase inhibitors

4. In determining when to begin anti-retroviral therapy in a TB and HIV co-infected patient who is on four-drug anti-TB treatment, the following factors should be taken into consideration:

   a. The patient's ability to adhere to the TB and HIV treatment regimens
   b. The patient's CD4+ T-cell counts
   c. Laboratory abnormalities
   d. All of the above

5. For patients switching from a RIF-based regimen to an RBT-based regimen, in order to initiate anti-retroviral therapy, how long is the "washout" period between the last dose of RIF and first doses of PIs and/or NNRTIs?

   a. 1 week
   b. 2 weeks
   c. 3 weeks
   d. 4 weeks

6. What dose of pyridoxine should be given to HIV-infected patients taking INH?

   a. 25 mg
   b. 50 mg
   c. 75 mg
   d. 100 mg

7. Which is the following is NOT part of the patient-centered approach to working with TB and HIV co-infected patients?

   a. Case management
   b. Directly observed therapy
   c. Patient education
   d. Self-administration of TB medications

8. The only HIV drug which is recommended for use with rifampin is:

   a. Nevirapine
   b. Saquinavir + ritonavir
   c. Efavirenz
   d. Lopinavir/ritonavir

9. When would it be prudent to add "coverage" for atypical tuberculosis in an HIV-positive patient whose smear is positive for AFB?

   a. The patient is on Kaletra
   b. The CD4+ count is more than 250
   c. The patient has a CD4+ count under 50 and extrapulmonary AFB
   d. The patient has severe weight loss

10. What are the advantages of DOT?

a. Ensure adherence to medication

   b. Provide opportunities to educate patient about TB and medication side effects
   c. Enable healthcare worker to educate patient about HIV and HIV testing
   d. All of the above

University of Medicine and Dentistry of New Jersey
Center for Continuing and Outreach Education

Treatment of Tuberculosis In Patients Infected with HIV: An Update

Registration Form

In order to obtain AMA PRA category 1 credit, participants are required to:

(1) Read the learning objectives, and review the activity, and complete the self-assessment.

(2) Complete this registration form and the activity evaluation form on the reverse side, and record your test answers below

(3) Send the registration and evaluation forms to:

UMDNJ-Center for Continuing and Outreach Education

via mail: PO Box 1709, Newark, NJ 07101-1709

via fax: (973) 972-7128

(4) Retain a copy of your test answers. Your answer sheet will be graded and if a passing score of 70% or more is achieved, a CME credit letter awarding AMA/PRA category 1 credit and the test answer key will be mailed to you within four (4) weeks. Individuals who fail to attain a passing score will be notified and offered the opportunity to complete the activity again.

Individuals who fail to attain a passing score will be notified and offered the opportunity to complete the activity again. This activity will be posted online at http://ccoe.umdnj.edu/aids

Please note: CE credit letters and long-term credit retention information will only be issued upon receipt of completed evaluation form.

SELF-ASSESSMENT TEST

Circle the best answer for each question on page 10.

1. A B C D
2. A B
3. A B C D
4. A B C D
5. A B C D
6. A B C D
7. A B C D
8. A B C D
9. A B C D
10. A B C D

Registration

First Name_____M.I._____ Last Name_____Degree_____

Social Security #_____(for credit recording purposes only)

Daytime Phone # _____ Evening Phone #_____

Fax #_____ E-mail_____

Preferred Mailing Address: Home Business

Address_____

City_____State_____Zip Code_____

Affiliation, Specialty_____

I attest that I have completed the activity as designed and I am claiming [up to 1 credit] _____ AMA/PRA category 1 credit

Signature_____ Date_____

Credit for this activity is available until December 31, 2006
UMDNJ-Center for Continuing and Outreach Education
PO Box 1709, Newark, NJ 07101-1709
Phone: 973-972-4267 or 1-800-227-4852

CE Activity Code: 07HC06-DE0

CME

University of Medicine and Dentistry of New Jersey
Center for Continuing and Outreach Education

Treatment of Tuberculosis in Patients Infected with HIV: An Update

Activity Evaluation Form

The planning and execution of useful and educationally sound continuing education activities are guided in large part by input from participants. To assist us in evaluating the effectiveness of this activity and to make recommendations for future educational offerings, please take a few moments to complete this evaluation form. Your response will help ensure that future programs are informative and meet the educational needs of all participants. Please note: CE credit letters and long-term credit retention information will only be issued upon receipt of this completed evaluation form. Thank you for your cooperation!

PROGRAM OBJECTIVES: Having completed this activity, are you better able to:	Strongly Agree				Strongly Disagree
Objective 1: Understand the mechanism of drug interactions between the rifamycins and nonnucleoside reverse transcriptase inhibitors and protease inhibitors.	5	4	3	2	1
Objective 2: Describe the new recommendations for treatment of active TB disease in HIV-infected patients on anti-retroviral treatment.	5	4	3	2	1
Objective 3: Identify adherence-enhancing mechanisms for working with co-infected patients.	5	4	3	2	1
Objective 4: Provide the rationale for delaying anti-retroviral treatment in patients newly diagnosed with HIV-infection and who have begun treatment for TB disease.	**5**	**4**	**3**	**2**	**1**

OVERALL EVALUATION:	Strongly Agree				Strongly Disagree
The information presented increased my awareness/understanding of the subject.	5	4	3	2	1
The information presented will influence how I practice.	5	4	3	2	1
The information presented will help me improve patient care.	5	4	3	2	1
The faculty demonstrated current knowledge of the subject.	5	4	3	2	1
The program was educationally sound and scientifically balanced.	5	4	3	2	1
The program avoided commercial bias or influence.	5	4	3	2	1
Overall, the program met my expectations.	5	4	3	2	1
I would recommend this program to my colleagues.	5	4	3	2	1

If you anticipate changing one or more aspects of your practice as a result of your participation in this activity, please provide us with a brief description of how you plan to do so.

_____

_____

_____

_____

Please provide any additional comments pertaining to this activity (positives and negatives) and suggestions for improvement:

Please list any topics that you would like to be addressed in future educational activities:

_____

_____

_____

_____

CE Activity Code: 07HC06-DE01

Reducing Vertical HIV Transmission in New Jersey

Sindy M. Paul, M.D., M.P.H., Linda Dimasi, M.P.A., Rose Marie Martin, M.P.H., and Helene Cross, Ph.D.

Reducing the risk of vertical HIV transmission is a successful public health priority in New Jersey. New Jersey has a high prevalence of HIV disease. Through December 31, 2004, 32,746 persons were living with HIV disease in the state. New Jersey ranks fifth in the country in cumulative reported AIDS cases, and third in the country in cumulative reported pediatric AIDS cases. Of 3,181 pediatric HIV/AIDS cases in New Jersey, 3,181 (99%) are a result of perinatal transmission.[1]

The risk of vertical HIV transmission without appropriate obstetrical care is 25%. With counseling and testing, antiretroviral agents starting in the second trimester, and an elective caesarian section at 38 weeks gestational age if the viral load is greater than 1,000, the risk of transmission can be reduced to 1%-2%. [2]

Reducing Perinatal HIV Transmission in New Jersey

Register

Tuesday
Nov. 3, 2005
8:00 AM - 4:00 PM
New Jersey Hospital Association, Princeton NJ

See page 19 to register.

Perinatal exposure to HIV disease and pediatric HIV/AIDS are required to be reported to the New Jersey Department of Health and Senior Services (NJDHSS), Division of HIV/AIDS Services (DHAS). NJDHSS, DHAS extensively evaluates all facets of prevention efforts to reduce the risk of mother-to-child HIV transmission. These evaluations indicate that over 90% of providers offer HIV testing; over 90% of patients accept testing, 91% of patients are diagnosed prior to labor and 4% are diagnosed at labor and delivery. Twenty to 25% of HIV infected pregnant women do not receive prenatal care or have two or fewer prenatal visits. However, if the HIV status is not documented on the medical record available in the labor and delivery area, the delivery team will not know the mother's HIV status, and will not know to provide antiretroviral agents to the mother and the newborn.

Antiretroviral use has increased from 8.3% in 1993, and to 84% in 2003. As the use of antiretroviral agents increased, the perinatal transmission rate in New Jersey has decreased from 21% in 1991, and to less than 4% in 2004.[1]

The major missed opportunity in the maximal reduction of vertical HIV transmission in New Jersey is women who present in labor with the delivery team unaware of their HIV status. In New Jersey, regulations require that all pregnant women receive counseling and be offered a voluntary HIV test.[3] Ideally, all pregnant women should be offered HIV testing during an initial prenatal visit to allow for timely initiation of treatment to reduce the chance of vertical transmission. However, a particular area of concern is women who present in labor with unknown HIV status (HIV test results not documented on the medical record). These women may not have been offered HIV counseling and testing during pregnancy, may have opted not to have an HIV test during pregnancy, or may not have received prenatal care. Clinical trial data have shown that antiretroviral medications, even when started during labor and delivery and continued in the neonatal period, can reduce mother-to-child HIV transmission by up to fifty percent.[4-6]

When women present in labor with unknown HIV status, the key to maximal perinatal HIV risk reduction is rapid HIV testing and initiation of short course therapy. The CDC sponsored Mother-Infant Rapid Intervention at Delivery (MIRIAD) study, showed that offering voluntary HIV testing during labor is feasible in obstetrical settings. In addition, point-of-care rapid HIV testing has been shown to provide results faster than sending specimens to the hospital laboratory for rapid HIV testing.[7] The CDC recommends rapid HIV testing for women in labor whose HIV status is unknown.[8] The NJDHSS has established a standard of care in which women who present in labor with unknown HIV status should receive counseling, be offered voluntary rapid HIV

testing, and, if a preliminary positive rapid HIV test result is obtained, be offered short course therapy with referral to a physician with experience and expertise treating HIV disease for both the mother and the child.[1-2] The "Public Health Service Task Force Recommendations for Use of Antiretroviral Drugs in Pregnant HIV-1-Infected Women for Maternal Health and Interventions to Reduce Perinatal HIV-1 Transmission in the United States – February 24, 2005" describes four options for short course therapy.[4]

NJDHSS, DHAS is collaborating with the New Jersey Hospital Association and the University of Medicine and Dentistry of New Jersey to evaluate if hospitals licensed to provide obstetrical care have rapid HIV testing and short course therapy available for women in labor with unknown HIV status. The original survey conducted in Essex, Hudson, and Union counties prior to the establishment of the NJDHSS, DHAS standard of care for women in labor with unknown HIV status indicated that rapid HIV testing and short course therapy was not available in any hospital for women in labor. An interim survey conducted in 2003 found that 19 of 23 hospitals that responded (83%) always or almost always offer HIV counseling in labor, 16 of 24 (67%) of hospitals that responded had rapid HIV testing available, and 17 of 19 (89%) had short course therapy available. The results of the hospital survey being conducted this summer are tentatively scheduled to be available for presentation at the November 3, 2005, perinatal HIV transmission conference to be held at the New Jersey Hospital Association. This conference will provide up-to-date information on reducing the risk of mother-to-child HIV transmission and will include workshops on counseling, rapid HIV testing, and short course therapy. A registration form for this free continuing medical education conference is available in this issue of AIDSLine.

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2. Centers for Disease Control and Prevention. Revised Guidelines for HIV Counseling, Testing and Referral and Revised Recommendations for HIV Screening of Pregnant Women. MMWR 2001:50(No RR-19):1-86.
3. Paul S, Burr C, DiFerdinando G. Updated Recommendations for Reducing Vertical HIV Transmission. New Jersey Medicine. 2003(Supplement): 100:27-31.
4. Public Health Service Task Force Recommendations for Use of Antiretroviral Drugs in Pregnant HIV-1-Infected Women for Maternal Health and Interventions to Reduce Perinatal HIV-1 Transmission in the United States – February 24, 2005. www.hivatis.org
5. Wade NA, Birkhead GS, Warren BL et al. Abbreviated Regimen of Zidovudine Prophylaxis and Perinatal Transmission of the Human Immunodeficiency Virus. NEJM 1998:339:1409-1414.
6. Guay LA, Musoke P, Fleming T, et al. Intrapartum and Neonatal Single-Dose Neviarapine Compared with Zidovudine for Prevention of Mother-to-Child Transmission of HIV-1 in Kampala, Uganda: HIVNET 012 Randomized Trial. Lancet 1999:354:795-802.
7. Centers for Disease Control and Prevention. Rapid Point-of-Care Testing for HIV-1 During Labor and Delivery — Chicago, Illinois, 2002. 2003:28:149-151.
8. Centers for Disease Control and Prevention. Rapid HIV Antibody Testing During Labor and Delivery for Women of Unknown HIV Status: A Practical Guide and Model. 2004 www.cdc.gov/hiv/projects/perinatal.

Hotlines

National HIV/AIDS Clinicians' Consultation Center Expands Hotlines

A new national resource, the National Perinatal HIV Consultation and Referral Service, is available for 24-hour consultation on preventing perinatal transmission of HIV from mother to infant. The consultation focuses on the management of HIV-infected pregnant women and exposed infants as well as indications and interpretations of rapid HIV testing in pregnancy. The perinatal hotline phone number is **888-448-8765 (888-HIV-8765)**.

The perinatal hotline is part of the National HIV/AIDS Clinicians' Consultation Center (NCCC) of the University of California San Francisco at San Francisco General Hospital. NCCC also offers consultation services for occupational exposures to blood-borne pathogens. The **National Clinicians' Post-Exposure Prophylaxis Hotline (PEPline)** is available 24 hours a day at

888-448-4911 (888-HIV-4911).

The National HIV Telephone Consultation Service is a warmline available through NCCC from 8AM to 8PM EST Monday through Friday. It provides consultation for questions on HIV/AIDS, including antiretroviral therapy, antiretroviral drug resistance, opportunistic infection prophylaxis and treatment, and laboratory evaluation. The telephone number is **800-933-3413**.

CDC-INFO

(Formerly known as CDC National AIDS Hotline)

For assistance concerning personal health issues, including questions regarding personal risk or where to get an HIV test, 24 hours, contact:

1-800-CDC-INFO
(1-800-232-4636)
1-888-232-6348 TTY

For assistance concerning HIV/AIDS treatment, clinical trials, or vaccines, Monday-Friday, 12 – 5 PM, contact:

AIDSInfo

1-800-HIV-0440
(1-800-448-0440)
1-301-519-0459 TTY
1-301-519-6616 Fax

In the News!

Breaking the Silence on HIV Over Fifty

A diverse group of health care professionals, community leaders, and HIV-positive activists gathered in Newark on May 25, 2005 to promote awareness and action on AIDS and Aging. Hosted by Broadway House for Continuing Care, this was the first public event sponsored by the New Jersey Association on HIV Over Fifty (NJAHOF).

NJAHOF presented its first "Breaking the Silence" award to Assemblywoman Nellie Pou (D, District 35), who chairs the Senior Issues Committee of the New Jersey State Assembly. With the support of NJAHOF, Ms. Pou introduced Assembly Resolution No. 247, designating May 27, 2005 as "HIV Infection in Persons 50 Years of Age and Older Awareness Day" in New Jersey. The resolution passed unanimously.

Shelly Kusnetz 2005©

NJAHOF gathering on May 25, 2005 at Broadway House for Continuing Care in Newark. Robert Skeist, RN, NJAHOF President; NJAHOF Consumer Activists Elizabeth Perez, Blair Frost, and Brenda Boone; Assemblywoman Nellie Pou; and Jeanine Reilly, RN, Broadway House Executive Director.

Assembly woman Pou is holding the "Breaking the Silence"plaque awarded to her by NJAHOF.

Presenting the NJAHOF award to Assemblywoman Pou were three HIV-positive New Jerseyans over fifty. Elizabeth Perez of Union City, Blair Frost of Maplewood, and Brenda Boone of Isaiah House in East Orange spoke personally and eloquently and welcomed the emergence of an understanding ally in state government. In accepting the award, Assemblywoman Pou drew on her experiences "growing up as a woman and a minority on the streets of Paterson."

NJAHOF, an affiliate of the National Association on HIV Over Fifty (NAHOF), grew out of the New Jersey Summit on HIV/AIDS and Aging, held in Iselin in October 2004. That gathering was sponsored by the Family Treatment Center of Newark Beth Israel Medical Center, an affiliate of the Saint Barnabas Health Care System, with the UMDNJ Center for Continuing & Outreach Education, Division of AIDS Education and the NY/NJ AIDS Education and Training Center (AETC).

At that Summit meeting, Rose Marie Martin, MPH summarized her epidemiological research for the New Jersey Department of Health and Senior Services (NJDHSS), Division of HIV/AIDS Services. Ms. Martin reported that the most current data from the NJDHSS showed that the relative proportion of new diagnoses of HIV/AIDS in persons 50 and over was 16.3% in 2002. Ms. Martin and other speakers provided illustrations of the importance of addressing aging as an important issue in HIV/AIDS prevention and care, including recommendations of increased HIV testing of people over fifty, outreach to senior centers and houses of worship, and "social marketing" campaigns that include images and issues related d to persons age fifty and older .

In effect, NJDHSS called on us to "break the silence" on this issue, and both NJAHOF and Assemblywoman Pou are answering that call.

NJAHOF's "Breaking the Silence" celebration also included nutritious food, live music, and a health fair including rapid HIV testing provided by the Family Treatment Center.

Speaking on behalf of the new organization were Jeanine Reilly, RN-C, BSN, LNHA, Executive Director of Broadway House and Robert Skeist, RN, ACRN, MS, geriatric HIV specialist at the Family Treatment Center. Ms. Reilly reported on her recent testimony at U.S. Senate hearings on HIV and aging in her capacity as a NAHOF national board member.

Mr. Skeist, the lead organizer for both the New Jersey Summit and NJAHOF, spoke of the new group's "family values: education, healing, and justice."

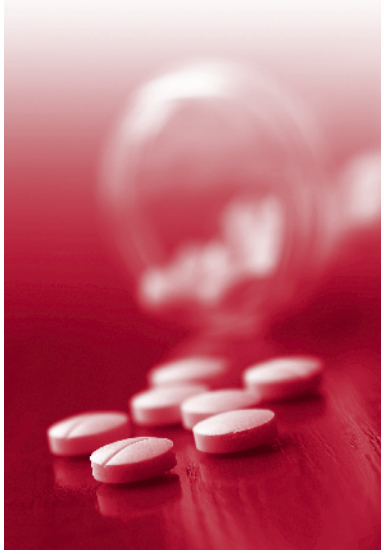
NJAHOF's education agenda addresses several audiences: older adults who do not realize they are at risk for HIV, health care professionals hesitant to conduct sex and drug histories on their older patients, and political leaders slow to react to the changing face of the epidemic.

Healing, for NJAHOF, includes access to expert medical care and anti-retroviral medications as well as promoting emotional and spiritual well-being.

By defining justice as a NJAHOF family value, the group expresses its commitment to fighting the stigmatization of people living with HIV/AIDS as well as the prejudice faced by people in terms of their age, ethnicity, language, economic status, or sexuality.NJAHOF plans for this autumn include an active role in Latino AIDS Day, solidarity with a government-private coalition in Camden, and developing support groups. As we are reminded by Eliahu Bishburg, MD, founder and director of the Family Treatment Center, "Our most urgent priority is case-finding. We have to reach out and test people so we can bring them into treatment."

For further information, contact Rob Skeist at (973) 926-6826, rskeist@sbhcs.com, or c/o Family Treatment Center (G 3), Newark Beth Israel Medical Center, 201 Lyons Ave., Newark, NJ 07112.

Suggested Guidelines for the Clinical Use of Tipranavir for ADAPs



American Academy of HIV Medicine ADAP Subcommittee

July 25, 2005

Tipranavir (Aptivus®), a new protease inhibitor co-administered with ritonavir, is indicated for combination antiretroviral treatment of HIV-1 infected adult patients with evidence of viral replication, who are highly treatment-experienced or have HIV-1 strains resistant to multiple protease inhibitors. This indication is based on analyses of plasma HIV-1 RNA levels in two controlled studies of Tipranavir of 24 weeks duration. Both studies were conducted in clinically advanced, 3-class antiretroviral treatment-experienced adults with evidence of HIV 1 replication despite ongoing antiretroviral therapy.

The approved dose of tipranavir (Aptivus®) is 500 mg taken with 200 mg of ritonavir (tipranavir/r), twice daily. Tipranavir must be co-administered with ritonavir to boost the therapeutic levels of tipranavir; otherwise, levels of tipranavir will be insufficient to inhibit HIV replication. Tipranavir/r must be taken in combination with other anti-HIV medications.

The following points should be considered when initiating therapy with tipranavir/ritonavir:

- The use of other active agents with tipranavir/ritonavir is associated with a greater likelihood of treatment response.
- Genotypic or phenotypic testing and/or treatment history should guide the use of tipranavir/ritonavir. The number of baseline primary protease inhibitor mutations affects the virologic response to tipranavir/ritonavir.
- Liver function testing should be performed at initiation of therapy with tipranavir/ritonavir and monitored frequently throughout the duration of treatment.
  Use caution when prescribing tipranavir/ritonavir to patients with elevated transaminases, hepatitis B or C co-infection or other underlying hepatic impairment.
- The extensive drug-drug interaction potential of tipranavir/ritonavir when co-administered with multiple classes of drugs must be considered prior to and during tipranavir/ritonavir use.
- The risk-benefit of tipranavir/ritonavir has not been established in treatment-naïve adult patients or pediatric patients.

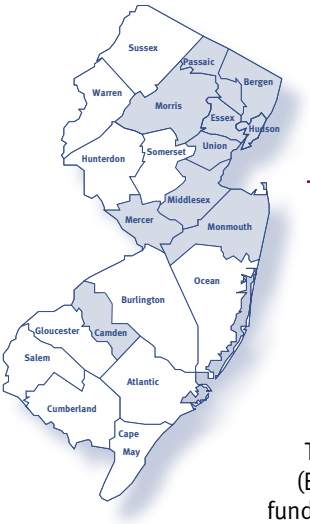
The results of the RESIST studies showed:

1) improved treatment response defined as › 1 log 10 drop in HIV VL from baseline at 24 weeks in 40% vs 18% comparator arms.
2) 34% vs 16% ITT analysis demonstrated HIV VL ‹ 400 copies/mL; 23% vs. 9% HIV VL ‹ 50 copies/mL in tipranavir vs. comparator.
3) median change from baseline in CD4+ cell count at week 24 was +34 cells/mm3 in patients receiving Tipranavir/ritonavir (n=582) versus +4 cells/mm3 in the comparator group of ritonavir-boosted PIs (n=577).
4) Tipranavir/ritonavir was associated with reports of clinical hepatitis and hepatic decompensation including some fatalities; this drug combination should be avoided if possible in patients with known hepatic disease. If it is used, LFTs should be monitored closely and patients informed to contact prescribers immediately if they experience any symptoms consistent with hepatic dysfunction.

Suggested Guidelines:

1) Tipranavir/ritonavir should be considered for salvage regimen if the patient's HIV resistance testing indicates resistance to other protease inhibitors, and no other class option for effective therapy is available.
2) Genotype resistance testing should guide decision to use this combination; in RESIST 1 and 2, poorer outcomes occurred in patients with more numerous primary PI mutations.
3) Use in patients with underlying hepatic disease (chronic active HBV, HCV) be avoided if alternative regimens are available. If it is used, the patients should be monitored closely for exacerbations in their liver dysfunction.
4) If patients have baseline abnormal LFTs, these should be assessed first before initiation of tipranavir/ritonavir.
5) Hepatic dysfunction was seen de novo as well, and LFT monitoring is recommended in the use of this medication.
6) Tipranavir/ritonavir will work best if combined with other active medications.

On the web: http://www.aahivm.org



Rapid HIV Testing in New Jersey Hospital Emergency Departments

Sindy M. Paul, MD, MPH, Evan Cadoff, MD, Eugene Martin, Ph.D., Maureen Wolski, Lorhetta Nichol, Rhonda Williams, Monica Harvey-Talbot, Skip Drumm, Phil Bruccoleri, Aye Maung Maung, Rose Marie Martin, MPH, and Linda Berezny, RN

The Hospital emergency departments (EDs) represent a new venue for publicly funded HIV counseling and testing in New Jersey. Rapid HIV testing in EDs allows access to HIV counseling and testing for persons who may not otherwise access the health care system. It also allows the hospital ED's staff to make a differential diagnosis, for conditions such as community-acquired pneumonia. For example, a preliminary positive rapid HIV test for a patient with pneumonia places PCP higher on the differential diagnosis list. The preliminary positive rapid HIV test helps the EDs staff with the decision to admit, which service to admit to, and initial treatment.

Through June 2005, rapid HIV testing is available at 11 EDs in New Jersey. These are: Jersey City Medical Center, Morristown Memorial Hospital, Newark Beth Israel Medical Center, Robert Wood Johnson University Hospital, St. Francis Medical Center, Trinitas Hospital, UMDNJ-University Hospital-Newark, Jersey Shore Medical Center, St. Joseph's Medical Center, Cooper University Hospital, and St. Michael's Medical Center. The map at the top shows the locations (in shaded areas) of these EDs.

Through June 23, 2005, 1,323 rapid HIV tests had been conducted at New Jersey EDs.

- 1,321 of the 1,323 (99.9%) persons tested received posttest counseling and results.
- 1,290 (97.5%) tested HIV negative.
- 33 (2.5%) had a preliminary positive and a confirmed positive result.
- 28 of the 33 (84.8%) of the infected persons were newly identified positives.
- 26 of the 28 (92.9%) newly identified positives received their confirmatory test result.
- 0 discordant lab results occurred.

As seen in Table 1, the majority of persons tested were minorities. The highest proportion of persons testing positive are:

- Male (19 of 652, 2.9%)
- Black (28 of 701, 4.0%)
- Age › 50 (5 of 107, 4.7%)

Table 1. Demographic Results

Gender

	Overall	%	Negative	Positive
Male	671	51%	652	19
Female	652	49%	638	14
Total	1,323	100%	1,290	33

Age (Years)

	Overall	%	Negative	Positive
‹ 5	0	0%	0	0
5 - 12	1	0%	1	0
13 - 19	121	9%	121	0
20 - 29	485	37%	480	5
30 - 39	347	26%	334	13
40 - 49	262	20%	252	10
› 50	107	8%	102	5
Not Specified	0	0%	0	0
Total	1,323	100%	1,290	33

Race

	Overall	%	Negative	Positive
White	217	16%	217	0
Black	701	53%	673	28
Hispanic	349	26%	345	4
Asian/PI	17	1%	17	0
Am.Ind/Al.	6	1%	6	0
Other	33	3%	32	1
Undetermined	0	0%	0	0
Total	1,323	100%	1,290	33

Rapid HIV testing has been successfully implemented at New Jersey EDs. Almost all patients (99.9%) received results. It is important to note that 85% of the people who tested positive at these EDs were previously undiagnosed. The proportion of persons testing positive at these EDs is 2.5%, which exceeds the proportion of those testing positive (2.0%) at all the statewide rapid HIV testing sites other than EDs.

Based on the success of publicly funded rapid HIV testing at Emergency Departments thus far, NJDHSS plans to expand rapid HIV testing to include more EDs.

Sweat and Tears continued from page 1

than promote AIDS awareness in those not yet infected, that we must build partnerships with those living with the virus to help others take responsibility. We must take often difficult and uncomfortable steps to create change in how we behave as a society. Creating change is not an activity that can be legislated or funded into place. It takes a conscious and collective effort, and a shared belief that the status quo is not working. In New Jersey we are witnessing budding archetypes of change occurring independently, driven by need and individual initiative. Recently, I have encountered several examples of change-oriented partnerships that are illustrative of what must happen on a large scale to halt the spread of HIV.

I recently attended a "Partnership for Health" training session by one of our award winning NY/NJ AIDS Education and Training Center (NY/NJ AETC) faculty members, Debbie Winters, MSN, ACRN.[1] The training curriculum, funded through the University of Southern California, Keck School of Medicine, is part of the CDC's 2003 Advancing HIV Prevention initiative, which includes four major strategies. Partnership for Health is designed to help healthcare professionals implement the strategy of "preventing new HIV infections by working with persons diagnosed with HIV and their partners." The goal of the training is to support clinicians in working with their clients on real behavior change around sexual activity, substance use and other risk behaviors. For some clinicians, the ability to have frank and meaningful dialogue with patients in these traditionally taboo subjects is underdeveloped at best. This specialized training is geared toward clinics that have made an organizational commitment to ensuring that this type of difficult but vital discussion takes place. The Peter Ho Clinic at St. Michael's Medical Center in Newark has made this commitment and has all of its clinicians involved in the intervention.

The Partnership for Health training was a real workshop, with lots of interaction, role-play and very little lecture. What I witnessed in this session was a team of providers, including case managers and physicians, stepping outside of their comfort zones and through role-play, practicing talking with clients about sex, drugs and self awareness. It was clear from the depth, realism and enthusiasm of each and every provider in the room that they knew their clients. They understood what motivated them, and were pleased to have the opportunity to practice these skills with each other. The comfort they displayed in working with each other showed that they had indeed created a Partnership for Health, the health of their patients. They saw what they had to offer their clients as a gift, the gift of responsibility that comes with health.

Another example of spontaneous change is the emergence of collaborative consortia committed to expanding the use of HIV rapid testing technologies. One example of a community coming together to accomplish this began this spring in Paterson. The P-TAS or Paterson Take Action and Save lives group is a coalition of individuals from HIV/AIDS care and prevention based programs, Passaic County Community College students and representatives from the NY/NJ AETC and Abbott Laboratories, with the goal of enhancing the existing outreach in the City of Paterson to bring more people to test. (See related article on page 17). The formation of these types of coalitions, generally adding to the plates of already busy people, is how change really happens. Although change is inevitable, it does not come about through inertia. If we are going to end this epidemic during this third decade, we cannot depend on money and policy to do it. We must pitch in and think creatively, change the way that we think about our own responsibility and role. We must view the end of the HIV/AIDS epidemic as only coming about through what is now possible: preventing its transmission. This will require a hard look at how we as a community of healthcare providers and consumers think, talk, act, teach, feel and react to and about HIV. In the words of Jesse Jackson: "Tears will get you sympathy. Sweat will get you change."

[1]Read about Debbie and her award at: http://www.thebody.com/hivawards/winners/dwinters.html

Paterson Takes Action and Saves Lives (P-TAS):

An Initiative to Promote HIV Rapid Testing

Dion Richetti, DC

The City of Paterson, New Jersey is a melting pot of cultures from around the world. Over 50% of the population is Hispanic, with individuals from many Latin American countries including Mexico, Puerto Rico, Peru, and the Dominican Republic. The city is also home to a thriving African-American community that accounts for approximately 33% of the population. The remaining population includes people with heritage from Europe, the West Indies, Native American nations, and the Middle East.

Unfortunately, the City of Paterson has also been the home of a growing epidemic of HIV/AIDS. This health crisis disproportionately impacts minority communities nationally, and New Jersey is no exception. African-Americans make up only 12% of the United States population but represent over 50% of the HIV cases in the state, while Latinos account for only 13% of the population but represent 21% of all persons living with HIV in New Jersey.

With new cases of HIV in New Jersey at approximately 2,000 per year, and over 30,000 people already living with the virus, identifying all persons living with HIV is a major public health priority for our state. The New Jersey Department of Health and Senior Services, Division of HIV/AIDS Services has supported a statewide campaign to bring as many people as possible, particularly those at highest risk, to take the newly approved HIV Rapid Tests. With its large minority population, including a substantial population of individuals outside of the healthcare system, the City of Paterson presents an opportunity to test a significantly at risk population in a defined geographic area.

Currently, the City of Paterson has many different locations where citizens can receive HIV testing. With a new oral mucosal test available that only requires a 20-minute wait for results, many individuals are getting tested. Many more are unaware of the testing sites, the severity of the disease and the means by which it is spread.

The P-TAS initiative brings together certified HIV Rapid Test Providers and HIV outreach workers, with additional resources from Passaic County Community College, St. Paul's Community Development Corporation, the New Jersey Department of Health and Senior Services - Division of HIV/AIDS Services, Abbott Laboratories, The Paterson Division of Health, the NY/NJ AIDS Education and Training Center at the University of Medicine and Dentistry of New Jersey, CASA, Inc., and Paterson Mayor Jose "Joey" Torres' office.

The goal of this project is to reach out to as many of the citizens of Paterson, through TV, print media, and personal contact in order to educate them on the prevention, diagnosis and treatment of HIV disease. Over the summer of 2005 the P-TAS group has disseminated surveys at several Paterson Summer Festivals. These 5-minute surveys challenged festivalgoers to ask themselves some questions about HIV risk and risk-behavior, while the P-TAS member delivering the survey directed people for testing at the festival or at local community sites.

If you or your organization would like to become involved, please contact the Paterson Mayor's Office on AIDS at (973) 321-1234, ext.6.

HIV/AIDS Medical Update Series: Free On-site Training

This free series for physicians, nurses, and other health care professionals and paraprofessionals has been extended.

Call or e-mail to schedule a 1-hour HIV medical education program at your health care site, and to find out about obtaining continuing education credit. Complete a brief request form available from Debra Bottinick at (609) 921-6622 or dbottinick@academycme.org

Sponsors: Center for Continuing and Outreach Education-Division of AIDS Education at UMDNJ (UMDNJ-CCOE-AIDS), and the American Academy of CME, Inc. (AACME), with funding from the N.J. Department of Health & Senior Services.

Topics available:

- Diagnosis and Initial Management of HIV/AIDS: What the Primary Care Physician Should Know
- HIV in Pregnancy - Preventing Perinatal Transmission
- HIV/AIDS and Hepatitis C Co-Infection
- Immunizations for HIV-Positive Adults
- Prevention and Prophylaxis for Occupational Exposure to HIV and Other Blood Borne Pathogens
- Prophylaxis and Treatment of Opportunistic Infections in Patients with HIV Disease
- Rapid Diagnostic HIV Testing

Coming soon: Non-Occupational Post-Exposure Prophylaxis

Internet Resources

UMDNJ Center for Continuing & Outreach Education Division of AIDS Education

http://ccoe.umdnj.edu/aids
Training programs for HIV/AIDS health and social service professionals. You can register online for most UMDNJ HIV/AIDS continuing education courses at: www.peopleware.net/0646a

Online CME is accessible free: http://ccoe.umdnj.edu/online

- Opportunistic Infections in HIV/AIDS
- Rapid Diagnostic Testing for HIV
- mpact of the New Guidelines for the Use of Antiretroviral Agents in HIV-1- Infected Adults and Adolescents
- Community Based HIV Treatment Adherence Support; NJ Standards of Practice
- new topics frequently posted

NJDHSS-Division of HIV/AIDS Services (DHAS)

www.state.nj.us/health/aids/aidsprv.htm

Epidemiological reports, policies, and clinical guidelines for HIV/AIDS care and services in New Jersey

www.state.nj.us/health/aids/rapidtesting/index.shtml

New Jersey state rapid testing site: FAQS, locations, and articles

http://www.state.nj.us/health/aids/aidsqtr.htm
New Jersey HIV/AIDS Semi-annual Newsletter (statistical report)

AETC National Resource Center

www.aids-etc.org
HIV treatment guidelines and key journal articles and news releases, links to all AIDS Education and Training Centers, training materials and curricula, and evaluation tools

US Dept. of Health & Human Services

www.aidsinfo.nih.gov
A service of the US Department of Health and Human Services offering HIV/AIDS treatment guidelines and other information on prevention, treatment, and research

US National Institutes of Health - sponsored searchable database of clinical trials:
http://clinicaltrials.gov

Centers for Disease Control (CDC)

CDC - Division of HIV/AIDS Prevention - HIV/AIDS Information

HIV/AIDS research, surveillance reports, funding announcements, research and reporting software, surveillance/ epidemiology slide sets

http://www.cdc.gov/hiv/hivinfo.htm#WWW

http://www.cdc.gov/hiv/rapid_testing/

CDC National Prevention Information Network (NPIN)

HIV, STD, and TB-related news summaries, funding announcements, materials, conference and satellite broadcast announcements

http://www.cdcnpin.org

FDA MedWatch

Updated reports on medication interactions and warnings:

1-800-FDA-1088

Subscribe to e-bulletin:

http://www.fda.gov/medwatch/elist.htm

UMDNJ Center for Continuing & Outreach Education - Division of AIDS Education
& The New Jersey Department of Health and Senior Services, Division of HIV/AIDS Services

2 GREAT HIV/AIDS CONFERENCES IN NOVEMBER!

REGISTRATION FORM

Reducing Perinatal HIV Transmission in New Jersey

November 3, 2005, 8:00am – 4:00 pm
NJ Hospital Association Conference Center
Princeton
Course Code: 06HC04
Free registration!

New Jersey Ryan White All-Titles Conference

November 15, 2005, 8:00am – 4:00 pm
Rutgers–Busch Campus Center, Piscataway
Course Code: 06HC05
Registration fee: $30 til 11/9/05, $40 on-site
*** limited scholarships available**

Please pre-register to assure your place!
All pre-registrants will receive confirmation letters with travel directions.

1) ONLINE at www.peopleware.net/0646a
2) COPY & MAIL this completed form (include payment if registering for All-Titles Conference) to:
UMDNJ-CCOE, P.O. Box 1709, Newark, NJ 07101
3) FAX this completed form to (973) 972-7128
4) CALL (800) 227-4852, Option 3

REGISTER NOW!!! PLEASE PRINT CLEARLY

Be sure to check which conference (s) you would like to attend.

☐ New Jersey Ryan White All-Title Conference: November 15, 2005, Piscataway [06HC05] $ 30

☐ Reducing Perinatal HIV Transmission in New Jersey: November 3, 2005, Princeton [06HC04] $ 0

Name_____Degree _____
Agency_____Job Title_____
Address _____
The above address is my (check one): ☐ work ☐ home address
City_____ State_____Zip Code _____
Phone: (_____)_____(Eve) (_____)_____ Fax (_____)_____

For All-Titles Conference only: Payment method:
Credit Card: VISA ☐ MC ☐ AMEX ☐ Signature _____ Exp. Date_____
Agency Purchase Order Number or Check Number_____

For additional program information, please contact Ms. Iman Siyam, Program Coordinator, at (973) 972-0076.

SAVE THE DATES!

Register Online at *www.peopleware.net/0646a* or call (800) 227-4852, option 3

Please call Michelle Thompson for registration information about the following: (973) 972-3690

November 3, 2005, 8:00 AM - 4:00 PM

Reducing Perinatal HIV Transmission in New Jersey

New Jersey Hospital Association, Conference Center

(Princeton, NJ)

November 15, 2005, 8:00 AM - 4:00 PM

New Jersey Ryan White All-Titles Conference

Busch Campus Center, Rutgers University

(Piscataway, NJ)

November 17, 2005, 12:30 - 3:00 PM

Satellite Broadcast: Revised Recommendations for HIV Screening of Adults, Adolescents, and Pregnant Women in Health Care Settings

See website: http://www.cdcnpin-broadcast.org/scripts/start.htm

(Viewing sites at NJN in Trenton and Newark)

March 8-10, 2006

NIMH and IAPAC International HIV Adherence Conference 2006

(Jersey City, NJ)

DO YOU WANT TO KEEP RECEIVING NEW JERSEY AIDSLINE??

To get or continue a free subscription, please check the appropriate box(es) and fax this page, showing your mailing label and any changes, to (973) 972-3371.

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- ❑ **Yes**, please continue to send mailings about other UMDNJ-CCOE AIDS education and training programs and opportunities.
- ❑ **No**, I do not wish to receive any more issues of the New Jersey AIDSLINE newsletter.
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If you have answered "Yes," please use the space below to give us your **email address and daytime contact phone number,** and make any necessary corrections to your label. Thanks!

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Center for Continuing & Outreach Education
Division of AIDS Education
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